

Toppan pioneers waterless offset on System 40 webs

Toppan Printing, Saitama, Japan



Koji Iwasaki, Senior Managing Director and Head of Manufacturing Management Division

Toppan Printing – Saitama

Row upon row, echelons of web offset presses in uninterrupted operation, arrayed with folders, robotized stacker-bundlers and program-controlled pallet transportation systems – all working in a precise ballet under the direction of tightly focused crews on duty 24/7 every day of the year. This is the Sakado Plant of Toppan Printing, a mammoth ‘in-plant fac-

tory’ built in 1997 as a core production center to handle everything from platemaking to binding and shipping. The facility covers 1.4 million square feet (128,000 square meters), the size of three athletic stadiums.

A very illustrious past

Founded in 1900 by printing professionals from the Japanese Ministry of Finance Printing Bureau, Toppan today is one of the world’s largest printing companies, with fiscal 2007 sales of 1 trillion 670 billion yen (roughly 1.7 billion US dollars) and more than 38,000 employees. The name of the company comes from *toppan*, the Japanese term for a relief printing plate. The founding printing engineers desired to build an industry around the most advanced steel-based printing machine of the time, the Erhört Letterpress, which used the galvanoglyph relief process.

Now two Komori System 40 webs throb in the heart of Toppan’s Sakado Plant, using waterless printing to produce work of dazzling quality and vibrant color with a density range that is akin to gravure work in impact and power. *On Press* spoke with four of the top managers: Koji Iwasaki, senior managing director and head of the Manufacturing Management Division, Yasumitsu Araki, manager of the Sakado and Asaka Plants, and Takuya Mitsui and Akihiro Takano, manager and assistant manger, respectively, of the Technical Department.

Mr. Iwasaki was deeply involved in the development and implementation of waterless printing at Toppan and described the history that led to the two Komori System 40s and their role in the development of the process at Toppan.

Komori crucial to waterless development

“At Toppan, we had successfully implemented waterless printing with sheetfed presses as early as 1982, but developing this process for web offset presented many challenges. We acquired the first System 40 in 1989 because we knew that only a Komori web would provide a platform on which this technique could be successfully implemented,” says Iwasaki.



From left: Yasumitsu Araki, Plant Manager of the Sakado and Asaka Plants; Takuya Mitsui, Manager of Technical Department, Information and Communications Division; and Akihiro Takano, Assistant Manager of Technical Department, Information and Communications Division

“While there are decisive advantages with waterless, there were unique difficulties. Whereas the ink is softened in conventional ink-and water printing, the ink remains hard with the waterless technique, which can result in hickeys, surface roughness and delamination – the tendency for the ink to pull the web up or down due to the higher tack of the ink,” he explains.

“We knew that the Komori webs offered high performance and that the gear ratio for plate cylinder and blanket cylinder was the same, resulting in minimal backlash, or play, and the same rotation speed for these two cylinders.”

“We created a special waterless R&D room and worked on the development of the optimum waterless printing process for Toppan and our customers for more than two years, experimenting with different grades of blanket coarseness and methods of controlling the temperature of the plate cylinder and the roller train. Since waterless printing requires special plates that employ silicone coating applied over a photopolymer and also uses waterless inks, we also worked closely with plate and ink suppliers to perfect our system,” says Iwasaki.

Benefits buyers can see

“The result was worth every ounce of effort,” he continues. “The development incurred costs and the costs of materials are higher, but these are more than offset by the many efficiencies and the revenue that is generated with the notably higher quality of waterless printed work. The difference is so striking that we can show it to customers, and they immediately realize the benefits.”

The quality advantages of waterless printing are clearly apparent, but differences in numerous parameters account for this. Colors are notably more vibrant and print contrast is higher because the water in the ink fountain

solution with conventional printing dilutes the ink and causes the printed dots to soak into the paper and spread, increasing dot gain.

The combination of higher ink densities and sharper dots results in much higher contrast than is possible with conventional printing. The minimal dot gain also permits much higher screen rulings.

The operational advantages of waterless are also very significant. Operators can get production-level color and register much faster than with conventional methods, so makereadies are shorter and paper waste is significantly reduced.”

“*Kando* is the promise of Komori products. And for printers, quality, cost, and quick delivery, or QCD, is the basic matrix on which we compete. Thus, understanding customer needs and providing printed products that exceed their expectations – what we call hospitality, or receptivity to new ideas – is Toppan’s ultimate mission. Waterless printing and the best conceivable press for this technique – the Komori System 40 – are the key to success in achieving this mission,” concludes Iwasaki.



Prol Editora deploys Komori webs in epic growth drive

Prol Editora Gráfica, São Paulo, Brazil



Prol employees with Eduardo Carvalho Filho, President (third from left), and Yoshiharu Komori, President and CEO of Komori Corporation

Prol Editora Gráfica — São Paulo

A 35-meter-long banner was displayed in the pressroom above the new Komori System 38S that had gone into production just two months earlier. On the left side, the banner depicted Brazilian symbols and landmarks, and on the right side symbols and landmarks from Japan. The press seemed to link both countries. The artist who created the banner intended to show the benefits that Japanese technology produces in the hands of Brazilian workers. Benefits for the millions of Brazilian readers of the books and magazines printed by Prol Editora, the proud owner of the first Komori web press in Brazil.

Acquisition strategy pays off

In 1975 Eduardo Carvalho Filho founded Gráfica Prol Editora in the city of São Paulo, the industrial capital of Brazil. Despite enormous growth and development over the years,

the company remains family owned. Since its founding, Prol has been dedicated to the production of books (mainly textbooks and art books) and high quality magazines. After five years of rapid growth, Prol acquired some of its competitors, buying out their largest competitor, Gráfica Parâmetro, in 1998. By this time, Prol was already the third-largest printing house in Brazil, a position that it retains today. The strategy of acquiring competitor print shops is a means of increasing market share and at the same time securing additional production facilities. Next Prol acquired the biggest textbook publisher in Brazil, Gráfica Saraiva.

First encounter with Komori quality

In 2004 Prol bought out a medium-sized printer called OESP Gráfica. This buyout was a very important acquisition because it pro-

vided Prol with its first contact with Komori presses: two old Lithrone 440s. Despite their age, the two Komori sheetfed presses were still printing with high quality, speed and reliability, facts that impressed the owner of Prol and became decisive for all investment decisions from then on. In November 2007, a new eight-color Lithrone S40P replaced these two older four-color Komori workhorses.

When the time came to buy a new high quality web, Komori was one of the options, because the manufacturer had just released a 578mm cut-off model (by far the most popular in Brazil) and had announced the 32-page version. Prol had already made the decision to go for 32-page presses, so it was essential to select a manufacturer with a 32-page offering. Since the printer had web presses from manroland, Heidelberg-Harris, KBA and Solna, the decision to invest in the Komori machine was driven by technical features not offered by the competitors. The press was supplied with a Japanese dryer, also a first in Brazil. Thus Prol got a press that was quite different from all other webs operating in Brazil at the time.

Ready to run

The first surprise for Prol was that the press was running less than four weeks after installation began. "In my experience," said Mr. Orlando Murad, an industrial director with extensive web press knowledge, "it would take at least two months before the press was up and running. But the Komori press came from the factory packed in a way that assured quick installation. Everything fitted perfectly and worked in the first trial." Plus, press operators from Prol had already taken the opportunity to be trained on their very own press at the Komori Sekiyado plant.

After only two months of production, millions of high quality magazines had been printed on the Komori System 38S, which was in operation three shifts a day, seven days a week. Since the press not only met but surpassed all expectations, a second Komori web press, this time a four-unit System 38D 32-page press with Full-APC, was ordered and installed in July 2008. Two more 32-page presses are scheduled to be commissioned, the first in early 2009.

Advanced equipment given first priority

Today Prol has two production facilities, both close to São Paulo, with a total of 1,200 employees. The Tamboré plant is dedicated to printing books of all kinds, including coffee-table books, which are printed in very short runs and produced only by sheetfed offset presses. The Diadema plant is dedicated to textbooks

and high quality magazines, printed mostly on web presses. Brazil has a yearly demand for nearly 130 million textbooks, almost half of them printed by Prol. The company postponed their plans to construct a new, unified plant because the acquisition of new printing equipment had first priority in the view of the young manager Eduardo Neto, the representative of the second-generation of the owning family. The printer also installed a secondhand eight-color Lithrone 40P purchased in the US and a new five-color Lithrone S29 with coater, which was dedicated to printing magazine and book covers.

'At least three more 32-page presses'

Both Eduardos, father and son, enjoy their leisure time on the backs of thoroughbred horses while making plans for the future of Prol. "Brazil right now is experiencing a period of political and economic stability, so we must use the opportunity to become even stronger, become the biggest, in order to face more difficult times that may hit Brazil again in a couple of years. We need at least three more 32-page presses to face the printing demand in Brazil, mainly for textbooks," concludes the young entrepreneur Eduardo Neto, with a grin on his face, reflecting the many successful investment decisions of the last few years.



Prol employees with Eduardo Carvalho Neto, Vice-president (fourth from left), and Mr. Komori

Kando Italian style: Punto Web's System 38S

Punto Web, Ariccia, Italy



image photo

Punto Web – Ariccia

Italian printer Punto Web's modern plant in Ariccia, near Rome, offers not only a look at today's printing market but also a glimpse of printing in the near future. The plant, managed by brothers Mario and Maurizio Farina, is a formidable example of layout optimization and workflow efficiency.

First of its kind in Italy

The most impressive machine in the facility is a 16-page full-spec five-color Komori 38S, the most accessorized press ever installed in Italy. Mario Pellegrini, Punto Web's factory manager and co-founding partner, led a tour of the plant, which was built in 2003 and has been in operation since mid-2006. The facility covers 183,000 square feet (17,000 square meters) and employs 110 people, with the pressroom running three shifts, from Monday to Saturday. In spite of the immense space

available, each corner has been exploited optimally by setting up a complete workflow path, from prepress to finishing with stackers and automatic palletizers, to keep production steps separate and jobs orderly. In other words, no space is wasted. Clearly the plant has been designed by people who have mastered web printing.

Production is carried out on two floors. The upper floor accommodates the prepress department, which is equipped with six Mac workstations and a large-format VLF Creo CTP unit operating a Prinergy flow that handles 250 plates a day. The ground floor houses the web presses and the sheetfed press. This is Punto Web's heart, a center that performs approximately 500 makereadies each month, still only a part of the company's potential productivity.

The main attraction here, the 16-page Komori

System 38S, is equipped with precisely the features Punto Web requires to deliver quality products: a flying splicer, an automatic platechanger, an ink fountain adjustment feature, a CIP3 connection, an automatic blanket washing system, an integrated hot-air drying unit, a gluing system, a completely automated folder unit for up to 50 different fold types, and a format cutter for the sheet exit. The overall speed of the press is another major advantage – the press is capable of up to 50,000iph.

200,000 catalog covers an hour

Mr. Pellegrini explained that their purchase of this Komori press over the competition was dictated by this specific configuration as well as other technical and commercial reasons.

"The first technical factor we looked at was plate-changing system efficiency," Mr. Pellegrini explains. "This Komori press automatically changes all plates for a complete job changeover in less than five minutes. We witnessed one job changeover – including washing, plate changing and fold changing – that took less than 15 minutes. The printing of 200,000 catalog covers took approximately one hour from the OK sheet."

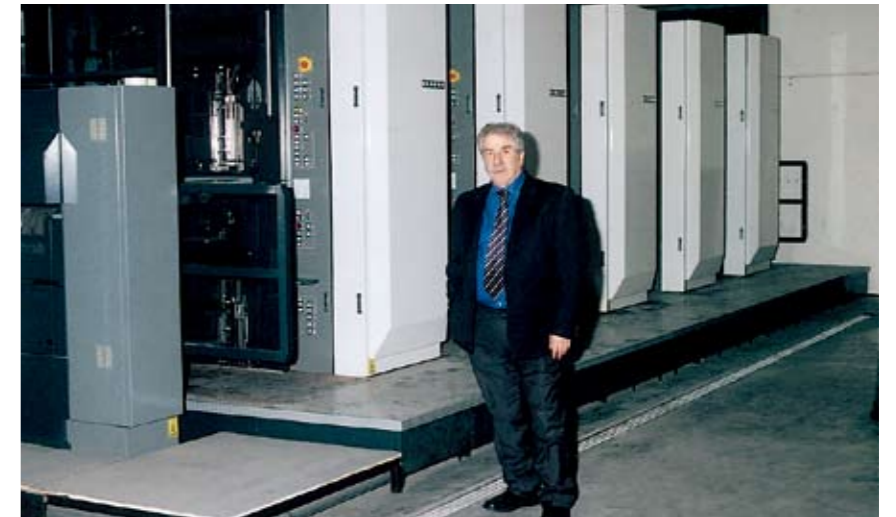
"Another significant point in favor of this Komori press is that all signatures are output to a single collection point," says Pellegrini. "All competitor presses for the same type of jobs need three different collection points, which requires additional plant space and increased costs."

And Pellegrini adds: "As of today, and considering that the press has been in operation only a few months, the technical and economical break-even point is 10,000 copies per run when compared to the 10-color press. However, this figure can certainly move down to 8,000 copies once the operators become more familiar with it."

"Another advantage this press has over the competition is simple operation," says Pellegrini. "Operations are executed from the GUI touch-screen, which allows an experienced web operator not only to master the press in a very short time but also to easily solve issues that arise during daily operation. We witnessed this during the operator training, which was completed in only one week but ensured that we could operate the press easily and competently," adds Pellegrini.

Standard protocol matters

Punto Web is especially pleased that the press can use the standard CIP4/JDF protocol. In fact, Komori is the only manufacturer that uses this protocol instead of a 'custom-



"Operations are executed from the GUI touch screen, which allows an experienced web operator not only to master the press in a very short time but also to easily solve issues that arise during daily operation."

Mario Pellegrini, Punto Web's Factory Manager

ized' JDF protocol, thus allowing the client's press to communicate with other presses in the workflow.

"With the System 38S, Punto Web can respond effectively and rapidly to a market that increasingly demands better quality at a lower price and at the same time shorter and shorter runs," says Pellegrini. "With this machine we can print and finish 200,000 covers in slightly more than one hour, including makeready and washing. Thus we are positioned to meet market expectations."

Punto Web has experienced firsthand the Komori philosophy underlying the System 38S – to deliver the best quality product possible by means of a highly automated, high-speed press with rapid turnaround. When asked what else they expect from the System 38S, Pellegrini replied that all of their expectations had been met. "Our decision to choose Komori has been extremely positive – the System 38S has enhanced our capabilities to a degree we had not imagined," says Pellegrini.

Komori System webs to drive growth of Beijing Hui Lin

Beijing Hui Lin Printing, Beijing, China



Beijing Hui Lin – Beijing

Beijing Hui Lin Printing, located in a beautiful area in southern Beijing, was established in 2004. At the time, the printing industry in China was entering an era of rapid development.

Beijing Hui Lin Printing was a joint venture of Zhongyuan Publication Media Investment Group and Beijing Hui Lin Paper. With its initial investment, the new company bought a 130,000-square-meter piece of land. Production started while the construction of the factory was still under way. In two short years, the company completed the production line. Beijing Hui Lin began printing on over 20 presses, purchasing one right after another, and introducing postpress and prepress units rapidly. It's almost as if a fresh upstart just suddenly appeared in Beijing's publication printing market.

In early 2007, President Cao Ming saw the company's rapid growth and began to envision the future of the company. The idea of introducing a commercial web press, which is the ideal machine for publication printing, took hold. President Cao Ming's efficient and decisive style had already set the tone of the company.

New web to join System 38S in Q1 2009

After meeting with Infotech, Komori's distributor for China, Cao Ming's vision for the company's future took shape rapidly. In November 2007, the company installed a System 38S web offset press. A new Komori web press will be commissioned in early 2009. Both presses feature Komori's KHS-AI system, a fully automatic fold configuration changeover



"We aim to create a new philosophy for publication printing companies in China. Our mission is to organize resources and create capital in a way that ensures efficient, rapid growth. The employees at Hui Lin have been working on a steady path to attain such growth."

Cao Ming, President of Beijing Hui Lin Printing

system, and a double-width delivery system. This highly efficient and customized facility now enables Beijing Hui Lin Printing to meet market needs – with dispatch.

By introducing the commercial web press, the company significantly increased its production ability. An increase in production in such a short period of time usually puts significant pressure on a company's sales capability. However, Beijing Hui Lin Printing is free from such pressure. In the summer of 2008, Beijing's traffic and transportation systems were affected by the Olympics. But thanks to careful logistics planning at Beijing Hui Lin, machines operated at full speed and shipping trucks arrived and departed without delays. In the midst of the current global financial crisis, Beijing Hui Lin continues to maintain its production levels. Sales for 2008 will exceed 300 million yuan (44 million US dollars) – an indication of the company's stability.

'We aim to create a new philosophy'

How has Beijing Hui Lin Printing maintained its steady growth? How has the printer overcome

the challenges of its competitors without being affected by today's financial crisis? According to President Cao Ming: "Beijing Hui Lin Printing operates with sales as its driving force, leveraging its competitive advantages as well as the experience and know-how that I gained working in the publishing industry in Beijing. We aim to create a new philosophy for publication printing companies in China. Our mission is to organize resources and create capital in a way that ensures efficient, rapid growth. The employees at Hui Lin have been working on a steady path to attain such growth."

Looking at plans for a newly designed plant and listening to President Cao Ming talk optimistically of the company's growth, it's easy to see an upbeat future for Beijing Hui Lin Printing.



2009 KOMORI CALENDAR

THE DIGITAL REVELATION OF ANALOG ARTIFACTS

The Komori 2009 calendar features works by Tadanori Yokoo, an internationally renowned artist, designer and writer. This is the fifth calendar in Komori's 10-part 'Graphic Arts of Japan' series. These calendars have won several coveted awards for design and printing.

This year's calendar is an attempt to accurately reproduce illustrations the artist made for use as posters and in magazine articles as well as the originals and the instruction sheets used for making prints. Yokoo has vast experience and knowledge

concerning the art of printing, and the calendar combines computer design and prepress processes with modern printing techniques in an effort to faithfully re-create the colors that were actually used in the originals. It is, so to speak, the digital expression of evocative, even provocative, works from the analog era of design and printing.

The calendar was printed on an eight-color Lithrone S40 UV press equipped with inline coater.

NOTES ON THE WORKS

Tadanori Yokoo's works in this calendar reflect his powerful contribution to the postwar Japanese avant-garde scene and his polymathic involvement with the crucial currents of intellectual thought. Although the textual elements of the works, including his instructions to the printer, are, of course, in Japanese, the printed work itself—spanning, celebrating and embodying the analog-to-digital migration of the last five decades—needs no translation for those in the industry familiar with the impact of this upheaval in design and printing.

In the words of Shoji Katagishi, Curator of the Toyama Museum of Modern Art:

The pages of these originals and instruction sheets, and the tracing paper covering them, have been turned countless times by the people referring to them, and it now seems as if the memory of their gaze has become embedded in them along with their breath and their sweat. The yellowing of the cellophane tape, the wrinkles of the pages, the accidental tears and stains: all these have been gently awakened from their long slumber and given a new breath of life in these reproductions, bearing witness to deep and rich memories. The printing techniques and processes involved have not been used merely as an act of exhibitionism, but rather are invaluable evidence that speaks of the mutual bond of trust which exists between the artist who conveys the finished image that he has in mind and the printer who interprets that vision on the deepest level and makes it a reality.



PROFILE OF THE ARTIST

Tadanori Yokoo was born in 1936 in Nishiwaki City, Hyogo Prefecture. His work has been shown at the New York Museum of Modern Art, the Tokyo Metropolitan Museum of Modern Art and the National Museum of Modern Art, Kyoto, as well as in Paris, Venice and São Paulo. As a prominent artist he continues to exert a major influence in the art world both domestically and internationally. As a prolific stage designer, film actor, author, graphic designer and painter, he has built an entirely original oeuvre, which often draws on 1960s pop culture.



NEWS FROM KUALA LUMPUR

President Komori Opens New Technical Service Center in Malaysia



Top left: Yoshiharu Komori, President and CEO, Komori Corporation
 Top right: from left: Chua Ngeun Lok, Managing Director, UPA Press Sdn Bhd; Kok Chin Wan, Managing Director, UPA Machinery Sdn Bhd; Mr. Komori; Sunny Pang, President of Selangor Chinese Printing Association; Alexander Lee, Relationship Manager, Selangor Chinese Printing Association



Komori is creating two new technical service centers, one in Kuala Lumpur and one in Prague, as part of a global ramping up of service and technical training capabilities to meet emerging customer needs, particularly in markets with high growth potential (see *On Press* No. 64 for details). The center in Malaysia was officially opened on December 4, 2008. President and CEO Yoshiharu Komori led a delegation of Komori executives to oversee the opening ceremony and an open house that attracted leaders of the printing industry from all over the region.

In his opening address, President Komori discussed both the current state of the worldwide printing industry and the role of the new facility.

“In creating high quality, high-performance presses and systems, Komori always focuses on the customer. Our overall mission is to contribute to printing culture – and society in general – through better, more advanced technologies.”

“Looking at the economic environment, it is clear that a sharp slowdown in the global economy has been taking place since mid-2008 as a result of the uncertainties in the American financial sector.”

Significance of Southeast Asia for Komori

“For the Komori Group, the market in Southeast Asia is extremely important. Yet, despite its tremendous expansion, Southeast Asia faces a very difficult time ahead.”

“With the percentage of overseas sales increasing every year, the need for global service facilities has become critical. As one part of this worldwide initiative, we have established the Komori Asia Technical Service Center (KAT), centered here in Malaysia, to provide a more calibrated response to our customers.”

“Operations began in October as we dispatched three service experts from Japan and equipped the Training Room with the latest equipment. We provide a broad range of training – from basic to advanced.”

“With the Parts Center that we opened last year in Singapore supplying parts 24 hours a day, 365 days a year, we are building a total system that will allow our customers to operate with the full confidence of strong backup.”

“Delivering *kando*, performance beyond expectations, to our customers is the operating objective of the Komori Group. Together with our distributor UPA Machinery, we



Komori Asia Technical Center
 Lot 3, Jalan 6/1, Seri Kembangan Industrial Area
 43300 Seri Kembangan
 Selangor, Malaysia
 Tel: (60) 03-8941-3289

are committed to make every effort in training and service as well as sales and the provision of parts,” he said.

Rewards beyond training

The Southeast Asia market holds special meaning for Mr. Komori: “In the past, I was in charge of sales in Southeast Asia, and I have always treasured the deep friendships that I made in those years. I hope to form new friendships – as printers discover that the rewards of our service centers go beyond training.”

After the opening remarks by Mr. Yoshiharu Komori and Mr. Sunny Pang, President of the Selangor Chinese Printing Association, Malaysia, they jointly started the Komori LS-440, which will be used to train the operators and technicians. This was followed by two presentations: one on the organization of KAT and one on ‘Preventive Maintenance for Better Profitability and Productivity.’

Mission and Training

KOMORI Asia Technical Service Center



NEWS FROM TSUKUBA

Tsukuba Plant Expansion on Course



12/09 OPEN

Artist's impression of the expanded Tsukuba Plant



December 12, 2008



October 17, 2008



August 27, 2008

Day by day, the shape of the new addition that will double the size of Komori's flagship Tsukuba Plant is becoming clearer, as the photographs at left show. Despite the worldwide economic downturn and the particularly rough times for the printing industry, Komori has decided to 'lean against the wind' in going full steam ahead with Phase Three construction.

Announced by President Komori at a news conference on June 3, 2008, the expansion will introduce an entirely new generation of state-of-the-art manufacturing equipment and technologies and allow the manufacture of web offset and banknote presses, now handled by the Sekiyado Plant, to be moved to Tsukuba. The Sekiyado facility will be completely reconfigured to focus on the manufacture of component parts. Thus, the production of all Komori large-size machines will be centralized in one ultramodern plant.

The Tsukuba Plant opened for full production in December 2005 in response to the popularity of the Lithrone S40 series sheet-fed presses. When complete in December 2009, Phase Three of development will add a further 27,000 square meters, resulting in a 60,000-square-meter site integrating manufacturing, assembly, testing, research and development, demonstration and training into one highly automated and highly efficient operation. Thus, for Komori's fastest-selling presses, manufacturing will be streamlined to further reduce lead times and redouble testing and quality assurance initiatives.

The massing of manufacturing technology, design and research expertise in Japan's Science City of Tsukuba will give Komori an unparalleled engine to pioneer and drive the future of the global printing industry.

"The synergy and technological cross-fertilization that we will gain by consolidating production of the larger presses in Tsukuba will unleash tremendous opportunities for innovation and ensure the success of our efforts to maintain the highest level of quality in the industry," declared Mr. Komori.



The *kando* moment

MAUGEIN, FRANCE

An alliance between Maugein Imprimeurs and Komori, stretching across more than two decades, stems naturally from a common bedrock of technological, industrial and ancestral origins. More importantly, this relationship has been an enduring story of unflinching trust between the Maugein family and Komori staff. A genuine story of *kando*.

Throughout the many years of this strong partnership, no less than six Komori presses – in a variety of formats and configurations – have flourished in Maugein workshops. This was recently punctuated by the arrival of Komori's state-of-the-art technology in the form of an eight-color Lithrone S40. This addition was celebrated on November 6, 2008 with a gorgeous inauguration ceremony that gathered an impressive number of distinguished guests and clients.

感動
K a n d o
Beyond Expectations